

1 APPLICATION FOR UNITED STATES LETTERS PATENT

2 ON INVENTION FOR:

3 RETRACTABLE TETHER FOR A PET

4 BY INVENTOR: James D. Balan

6 Agt. Doc. No.: BALJ09A

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14 TO ALL WHOM IT MAY CONCERN:

15 BE IT KNOWN that I, James D. Balan, a citizen of THE
16 UNITED STATES OF AMERICA and resident of: Somerville, MA
17 02143 have invented certain new and useful improvements in
18 a(n): RETRACTABLE TETHER FOR A PET of which the following is
19 a full, clear, concise and exact description:

1 Inventor: James D. Balan
2 Invention: RETRACTABLE TETHER FOR A PET
3 DOC. No.: BALJ09A

4 BACKGROUND OF THE INVENTION

5 Field of the Invention:

6 The present invention relates to a retractable tether. More
7 particularly, the present invention relates to a retractable tether for
8 a pet.

9 Description of the Prior Art:

10 Numerous innovations for retractable tethers have been provided in
11 the prior art that will be described. Even though these innovations may
12 be suitable for the specific individual purposes to which they address,
13 however, they differ from the present invention.

14 A FIRST EXAMPLE, U.S. Patent No. 4,197,817 to Crutchfield teaches
15 a device which can be attached to the collar of a dog or other pet which
16 device contains all the elements of a leash necessary for walking the
17 animal. A spool is disposed in a housing and connected thereto by an axle
18 member which runs through the center of the spool. A spring is disposed
19 in the center of the spool and connected to the axles and spool so as to
20 impart rotary motion to the spool. A leash is connected at one end to the
21 spool and at the other end to a foldable handle. When allowed to run
22 free, the spool rotates by action of the spring, thus coiling the leash
23 thereon until the handle makes contact with the housing. The handle is
24 folded around the housing in a groove provided therefor. The handle may
25 be pulled away from the housing and the leash uncoiled to the desired
26 length whereupon a small cam is wedged between the spool and the housing
27 thus stopping of the motion of the spool.

1 A SECOND EXAMPLE, U.S. Patent No. 4,328,766 to Deibert teaches a
2 casing which is intended to resemble a scaled-down brandy barrel that
3 mounts an internal shaft on which is journaled a sleeve which mounts a
4 leaf spring and a coiled leash which extends through a slot in the casing.
5 The collar also mounts a drum with spaced holes in its circumference which
6 coact with a detent finger externally operable by a button which is
7 designed to simulate a bung plug in the barrel. The barrel loops have
8 extended bails through which the dog's collar engages.

9 A THIRD EXAMPLE, U.S. Patent No. 4,328,767 to Peterson teaches a
10 retractor mechanism that is mounted on the collar adjacent the buckle, the
11 weight of these parts holding them under the animal's neck when the leash
12 is retracted. A guide ring half way around the collar provides a stop for
13 a handle on the free end of the leash when the leash is retracted, thus
14 positioning the handle on top of the animal's neck when the leash is not
15 in use. A semicircular spring steel stiffening member extends between the
16 retractor mechanism and said guide ring to secure these parts to the
17 collar and provide a smooth sliding surface for the leash as it is
18 extended and retracted.

19 A FOURTH EXAMPLE, U.S. Patent No. 5,233,942 to Cooper et al. teaches
20 a leash holder assembly that is removably mountable to the collar of a
21 pet, and including a leash holder made of flexible material and having
22 face-to-face rectangular panels that are stitched along their bottom and
23 side edges in such a manner to provide an open-topped pouch for storing
24 a leash in coiled-up condition, and including a rectangular closure flap
25 that can fold over the top of the pouch to close the pouch. Velcro
26 fastening elements used to secure the closure flap. Velcro equipped tabs
27 secure the holder to the pet collar and the leash is attached at one of
28 its ends to the collar and the handle of the stored leash protrudes
29 through an opening in the pouch. The leash is quickly deployable when
30 required by grasping the handle and pulling it away from the pouch so that
31 the leash uncoils from the grasp of the pouch.

1 A FIFTH EXAMPLE, U.S. Patent No. 5,947,062 to Hoffman et al. teaches
2 a restraint system which can remain on an animal at all times. In one
3 embodiment, the restraint system includes a strap which serves as both a
4 collar and a leash. The restraint system can be in either an extended
5 state or a retracted state. In the extended state, the collar portion is
6 positioned around the animal's neck and the leash portion extends from the
7 collar portion to the animal owner's hand. In the retracted state, the
8 entire restraint system is stored around the animal's neck by reversibly
9 attaching the leash portion to the collar portion, as well as to the leash
10 portion itself, in an overlapping spiral configuration. VELCRO strips can
11 be used to reversibly attach the leash and collar portions. Another
12 embodiment of the invention includes a restraint system which includes a
13 collar assembly coupled to a leash assembly. The collar assembly and the
14 leash assembly are made from separate straps and are attached to each
15 other by a connecting element. The connecting element can be, for
16 example, a restraining ring, a rivet or thread (in which case the collar
17 assembly is fixedly attached to the leash assembly), or a clasp (in which
18 case the collar assembly is reversibly attached to the leash assembly).
19 Both the collar assembly and the leash assembly include VELCRO strips
20 which enable the leash assembly to be held to the collar assembly (and
21 itself) when the leash assembly is wrapped around the collar assembly in
22 an overlapping spiral configuration.

23 It is apparent that numerous innovations for retractable tethers
24 have been provided in the prior art that are adapted to be used.
25 Furthermore, even though these innovations may be suitable for the
26 specific individual purposes to which they address, however, they would
27 not be suitable for the purposes of the present invention as heretofore
28 described.

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SUMMARY OF THE INVENTION

2 ACCORDINGLY, AN OBJECT of the present invention is to provide a
3 retractable tether for a pet that avoids the disadvantages of the prior
4 art.

5 ANOTHER OBJECT of the present invention is to provide a retractable
6 tether for a pet that is simple to use.

7 BRIEFLY STATED, STILL ANOTHER OBJECT of the present invention is to
8 provide a retractable tether for a pet. A leash is retractably connected
9 to a collar by a pair of retractors. Each retractor includes a housing
10 and a retracting mechanism. The retracting mechanism includes an axle and
11 a recoilable spring. In one embodiment, the recoilable spring allows the
12 leash to freely recoil and be automatically wrapped around the axle when
13 tension is removed from the leash. In another embodiment, each retractor
14 further includes a ratchet mechanism. The ratchet mechanism does not to
15 allow the leash to freely recoil and be automatically wrapped around the
16 axle when tension is removed from the leash, but rather requires an
17 initial tug on the leash and maintaining tension thereon to cause the
18 leash to wrap around the axle.

19 The novel features which are considered characteristic of the
20 present invention are set forth in the appended claims. The invention
21 itself, however, both as to its construction and its method of operation,
22 together with additional objects and advantages thereof, will be best
23 understood from the following description of the specific embodiments when
24 read and understood in connection with the accompanying drawing.

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BRIEF DESCRIPTION OF THE DRAWING

2 The figures of the drawing are briefly described as follows:

3 FIGURE 1 is a diagrammatic perspective view of the present invention
4 in use;

5 FIGURE 2 is an enlarged diagrammatic perspective view of the area
6 generally designated by the arrow 2 in FIGURE 1 of the present
7 invention;

8 FIGURE 3 is an enlarged diagrammatic cross sectional view taken on line
9 3-3 in FIGURE 2 of a first embodiment of the retractor of the
10 present invention; and

11 FIGURE 4 is an enlarged diagrammatic cross sectional view taken on line
12 4-4 in FIGURE 2 of a second embodiment of the retractor of the
13 present invention.

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LIST OF REFERENCE NUMERALS UTILIZED IN THE DRAWING

- 2 10 retractable tether of present invention
3 12 pet
4 14 collar
5 16 leash
6 18 pair of retractors
7 20 first end of collar 14
8 21 second end of collar 14
9 22 ring of collar 14
10 24 hook and loop fasteners of collar 14
11 26 facing surfaces of other end of pair of ends 20 of collar 14
12 28 pair of ends of leash 16

13

First Embodiment

- 14 118 pair of retractors
15 130 housing of each retractor of pair of retractors 118
16 132 retracting mechanism of each retractor of pair of retractors 118
17 134 slit in housing 130 of each retractor of pair of retractors 118
18 136 axle of retracting mechanism 132 of each retractor of pair of
19 retractors 118
20 138 recoilable spring of retracting mechanism 132 of each retractor
21 of pair of retractors 118

22

Second Embodiment

- 23 218 pair of retractors
24 230 housing of each retractor of pair of retractors 218
25 232 retracting mechanism of each retractor of pair of retractors 218
26 236 axle of retracting mechanism 232 of each retractor of pair of
27 retractors 218
28 240 ratchet mechanism of each retractor of pair of retractors 218

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DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

2 Referring now to the figures, in which like numerals indicate like
3 parts, and particularly to FIGURE 1, the retractable tether of the present
4 invention is shown generally at 10 for a pet 12.

5 The overall configuration of the retractable tether 10 can best be
6 seen in FIGURE 2, and as such, will be discussed with reference thereto.

7 The retractable tether 10 comprises a collar 14, a leash 16, and a
8 pair of retractors 18. The leash 16 is retractably connected to the
9 collar 14 by the pair of retractors 18.

10 The collar 14 is slender and elongated.

11 The collar 14 has a pair of ends 20, 21 and a ring 22. The ring 22
12 of the collar 14 is attached to the first end 20 of the collar 14 by the
13 one end 20 of the collar 14 passing therethrough, doubling back onto
14 itself, and being affixed to itself.

15 The second end 21 of the collar 14 passes freely through the ring
16 22 of the collar 14, doubles back onto itself, and is adjustably and
17 replaceably affixed to itself by hook and loop fasteners 24. The hook and
18 loop fasteners 24 of the collar 14 are disposed on facing surfaces 26 of
19 the second end 21 of the collar 14.

20 The leash 16 is slender and elongated.

21 The leash 16 has a pair of ends 28. The pair of ends 28 of the
22 leash 16 are operatively connected to the pair of retractors 18,
23 respectively.

24 The pair of retractors 18 are diametrically opposed to each other
25 and attached to the collar 14.

26 The specific configuration of a first embodiment of each retractor
27 118 can best be seen in FIGURE 3, and as such, will be discussed with
28 reference thereto.

29 Each retractor 118 comprises a housing 130 and a retracting
30 mechanism 132. The retracting mechanism 132 of each retractor 118 is

1 operatively connected within the housing 130 thereof and to an associated
2 end 28 of the leash 16.

3 The housing 130 of each retractor 118 is generally cylindrically-
4 shaped. The housing 130 of each retractor 118 extends generally normally
5 to the collar 14.

6 The housing 130 of each retractor 118 has a slit 134. The slit 134
7 in the housing 130 of each retractor 118 extends axially therealong. The
8 leash 16 extends through the slit 134 in the housing 130 of each retractor
9 118.

10 The retracting mechanism 132 of each retractor 118 comprises an axle
11 136 and a recoilable spring 138. The recoilable spring 138 of the
12 retracting mechanism 132 of each retractor 118 is shown diametrically in
13 FIGURE 3.

14 The axle 136 of the retracting mechanism 132 of each retractor 118
15 extends axially and rotatably within the housing 130 of the retracting
16 mechanism 132 of an associated retractor 118. An end 28 of the leash 16
17 extends through the slit 134 in the housing 130 of the associated
18 retractor 118 and is attached to the axle 136 of the retracting mechanism
19 132 of the associated retractor 118.

20 The recoilable spring 138 of the retracting mechanism 132 of each
21 retractor 118 operatively connects the axle 136 of the retracting
22 mechanism 132 of the associated retractor 118 to the housing 130 of the
23 associated retractor 118.

24 The recoilable spring 138 of the retracting mechanism 132 of each
25 retractor 118 allows the leash 16 to freely recoil and be automatically
26 wrapped around the axle 136 of the retracting mechanism 132 of the
27 associated retractor 118 when tension is removed from the leash.

28 The specific configuration of a second embodiment of each retractor
29 218 can best be seen in FIGURE 4, and as such, will be discussed with
30 reference thereto.

31 Each retractor 218 is identical to each retractor 118, but with the
32 addition of a ratchet mechanism 240.

1 The ratchet mechanism 240 of each retractor 218 operatively connects
2 the axle 236 of the retracting mechanism 232 of the associated retractor
3 218 to the housing 230 of the associated retractor 218.

4 The ratchet mechanism 240 of each retractor 218 does not allow the
5 leash 16 to freely recoil and be automatically wrapped around the axle 236
6 of the retracting mechanism 232 of the associated retractor 218 when
7 tension is removed from the leash, but rather requires an initial tug on
8 the leash 16 and maintaining tension thereon to release the ratchet
9 mechanism 240 of the associated retractor 218 (similar to that of a
10 conventional window shade) to cause the leash 16 to wrap around the axle
11 236 of the retracting mechanism 232 of the associated retractor 218.

12 It will be understood that each of the elements described above, or
13 two or more together, may also find a useful application in other types
14 of constructions differing from the types described above.

15 While the invention has been illustrated and described as embodied
16 in a retractable tether for a pet, however, it is not limited to the
17 details shown, since it will be understood that various omissions,
18 modifications, substitutions and changes in the forms and details of the
19 device illustrated and its operation can be made by those skilled in the
20 art without departing in any way from the spirit of the present invention.

21 Without further analysis, the foregoing will so fully reveal the
22 gist of the present invention that others can, by applying current
23 knowledge, readily adapt it for various applications without omitting
24 features that, from the standpoint of prior art, fairly constitute
25 characteristics of the generic or specific aspects of this invention.